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HIGH SCHOOL,
SALT LAKE CITY, UTAH.

ON A SMALL COLLECTION OF LICHENS FROM JAMAICA, WEST INDIES

R. HEBER HOWE, JR.

In April, 1909, at the request of Dr. Duncan S. Johnson, of Johns Hopkins University, the New York Botanical Garden forwarded to me a small collection of lichens collected by him on the island of Jamaica in 1903 and 1906.

At the time I worked over and prepared this list, I was unable to find any recently published list¹ of the lichen flora of Jamaica, but the publication of Dr. L. W. Riddle's list² has led me to publish this enumeration. For the advantage of comparison, this list follows Dr. Riddle's arrangement.

Two specimens of the genus *Cladonia* were sent to Prof. Bruce Fink for determination: and the crustose species to Dr. H. E. Hasse; the genus *Stereocaulon* was sent to Dr. Riddle who has also determined several other specimens. Acknowledgment is here most gratefully made.

PYRENOCARPEAE

Pyrenula "Lichen No. 7. Goat Isd. IV-16-06." A composite specimen.

Pyrenula "no spores"; *Porina* sp. (?). Spores " $28 \times 8 \mu$."

Anthracotheceium Mass. "Lichen No. 4. Goat Isd. IV-16-06."

One specimen spores "muriform, pale-brown," Determined by Dr. Hasse. Nos. 1, 6, 8, 11, 31, 32, 37, and 100 and labelled "Lichens" belong in other groups.

CONIOCARPINEAE

Sphaerophorus compressus Ach. "Lichen No. 36. Sir John, V-1-06." One specimen determined by Prof. Fink.

¹ Swartz, Prod. 1788 and Flora Indiae Occidentalis, 1806.

² Riddle, MYCOLOGIA, 4: 125-140. 1912.

GRAPHIDINEAE

Arthonia distendens Nyl. "Lichen No. 9 Goat Isd. (near Old Harbor), IV-16-06." The bark of this specimen supports several species, beside the above. Spores "40-60 \times 24 μ , oblong and ovoid-oblong, colorless becoming light brown, 6-8 septate (7-9 locular) with several septations in longitudinal axis. Determined by Dr. Hasse. Other species present *Arthonia radiata* (Per.) Th. Fr. "no spores"; *Microglæna* "spores narrowly ellipsoid 23-32 \times 10-14.4-7 μ septate and submuriform, decolorate becoming light brown"; *Microthelia* (?) *thelena* (Ach.) Müll. Arg. Spores "oblong-ellipsoid, 15-18 \times 5-6 μ "; *Thelotrema* (?) *lepadinum* Tuck. Spores "24-52 \times 7-16 μ ." Determined by Dr. Gaphis "Lichens No. 5. John Crow Peak, IV-18-03." One specimen, "section *Diplographis*, but no spores seen." Determined by Dr. Hasse.

Chiodecton rubrocinctum Nyl. (= *Ch. sanguineum* (Sw.) Wain.) "Lichen No. 18. Clydesdale, IV-28-06." One specimen determined by Dr. Hasse.

Thelotrema (?) *subtile* Tuck., Determined by Dr. Hasse.

CYCLOCARPINEAE

Ocellularia alba (Feé) Müll. Arg. One specimen determined by Dr. Hasse. Spores "colorless roundish and ovoid-oblong, 3-4 septate."

Baeomyces absolutus Tuck. "Lichen No. 16, near Vinegar Hill (Trees), IV-23-03" and "Lichen 48 on *Eucalyptus* Whitfield Hall Wks. IV-22-03." Two specimens determined by Dr. Hasse No. 48 "contains a *Porina* also."

Cladonia rangiformis Hoffm. "Lichen No. 33, *Cladonia* sp.? Cinchona Hill, V-2-06." One specimen, determined by Prof. Bruce Fink.

Cladonia rangiformis var. *cubana* Wain. "Lichen No. 45, Blue Mt. Peak, IV-20-03, *Cladonia* sp." One specimen determined by Prof. Fink.

Cladonia didyma var. *rugifera* Wain. "Lichen No. 43, *Cladonia* sp. Clyde Valley, V-8-06." One specimen determined by Prof. Fink.

- Cladonia aggregata* (Sw.) Ach. "Lichen 34, *Cladonia* sp.? Cinchona Hill, V-20-06." One specimen determined by Prof. Fink.
- Cladonia squamosa* var. *phyllocoma* Rabenh. "Lichen 44, *Cladonia* sp. Clyde Valley, V-8-06." One specimen determined by Prof. Fink.
- Stereocaulon ramulosum* (Sw.) Ach. "Lichen No. 13, *Cladonia*, sp. Rd. to Morce's Gap (?)." Specimen determined by Dr. Riddle, of which a part is now in his herbarium.
- Stereocaulon cornutum* Müll. Arg. "Lichen No. 14, Morce's Gap, 03." One specimen determined by Dr. Riddle.
- Leptogium tremelloides* (L.f.) Gray. "Lichens No. 2, New Haven Gap, IV-30-03," and "Lichen No. 30, Sir John, V-1-06." Two specimens. Spores $28-32 \times 14 \mu$. Determined by Dr. Riddle.
- Leptogium phyllocarpum* (Pers.) Nyl. "Lichen No. 19," and "20. Cinchona Hill, IV-28-03." Two specimens. Spores $28-40 \times 10-18 \mu$. Verified by Dr. Riddle.
- Leptogium* "Lichen No. 3, Morce's Gap, IV-23-03." One sterile fragment is perhaps referable to some form of *chloromelum* (Sw.) Nyl.
- Pannaria* (*Parmeliella*) *pannosa* (Sw.) Delis. "Lichen No. 38, Portland Gap, IV-16-06," and "Lichen No. 39, Cinchona Hill, IV-28-03." Two sterile specimens. Dr. Riddle refers a part of this material to *P. Mariana* var *isideoidea* Müll. Arg.; a part to *P. rubiginosa* (Thurb.) Del., but in the absence of apothecia it is thought best to refer both to *Pannaria pannosa*.
- Coccocarpia pellita* (Ach.) Müll. Arg. "Lichen No. 10, Cinchona Hill, IV-25-06 (on soil)." One specimen spores $8 \times 16 \mu$. Verified by Dr. Riddle.
- Sticta Weigelli* (Ach.) Wain. "Lichen No. 27, Cinchona Hill, IV-03." Determined by Dr. Riddle.
- Sticta damaecornis* (Sw.) Ach. Nos. 15, 17, 21, 22, 23, 29, 35, 41, and 42. Nos. 29, 35, collected in "V-06," all other in "IV-03," and representing in all the following localities: Blue Mt., Cinchona Hill, New Haven Gap, Latimer River, and Sir John. The specimens exhibit the wide variation in form of thallus location shown by this species. The envelopes in which the spe-